

We claim:

1. A method for varying a hand-off base station list comprising the steps of:
measuring real-time traffic flow criteria associated with one or more base stations, the stations included in an adaptable neighbor list of potential hand-off base stations;
varying a size of the neighbor list depending on the measured traffic flow criteria; and
enabling or preventing a hand-off between a wireless device and at least one of the base stations on the varied list based on the measured traffic flow criteria.
2. The method as in claim 1 further comprising the step of varying the size of the neighbor list so that the size is set below an initial size to prevent a return to an overload traffic condition.
3. The method as in claim 1 further comprising the step of maintaining an initial neighbor list and generating an adaptable neighbor list of potential hand-off base stations based on traffic flows.
4. The method as in claim 1 further comprising varying the size of the adaptable neighbor list without requiring human intervention.
5. The method as in claim 1 further comprising decreasing the size of the adaptable neighbor list as the traffic flow criteria worsens.
6. The method as in claim 1 further comprising increasing the size of the adaptable neighbor list as traffic flow criteria improves.
7. The method as in claim 1 wherein the number of base stations included in the adaptable neighbor list of potential hand-off base stations is less than a maximum number of base stations included in an initial neighbor list.
8. The method as in claim 1 further comprising the step of forwarding the varied, adaptable neighbor list to the wireless device.
9. The method as in claim 1 wherein the wireless device is operable to enable the hand-off.
10. The method as in claim 1 wherein the at least one base station on the varied list is operable to enable the hand-off.

11. A method for varying a hand-off base station list comprising the steps of:
- measuring traffic flow criteria of a base station on the list;
 - comparing the measured flow criteria to a threshold; and
 - setting a neighbor list size associated with the threshold based on the results of the comparison.
12. The method as in claim 11 further comprising the steps of:
- comparing the measured traffic flow criteria to a plurality of thresholds; and
 - setting the size of the list to a size associated with a last threshold of the plurality of thresholds exceeded by the measured traffic flow criteria.
13. The method as in claim 11 wherein a value of the threshold may change over time.
14. The method as in claim 12 wherein the number of thresholds may change over time.
15. The method as in claim 11 wherein the neighbor list size associated with the threshold may change over time.
16. A method for controlling hand-offs in a base station, comprising the steps of:
- measuring, in real-time, traffic flow criteria related to a wireless network; and
 - controlling the length of a neighboring base station list as a function of the value of the traffic flow criteria.
17. A method for use in a wireless network comprising the step of enabling a base station currently serving a call for a wireless device to hand-off said call to another base station on its neighboring base station list only when a real-time measurement of a traffic flow criteria meets an acceptable level.
18. The method as in claim 17 further comprising the step of preventing said base station from handing-off said call when said traffic flow criteria does not meet said acceptable level.
19. A method for use in a wireless network comprising the step of enabling a first base station to hand-off a call being served by said first base station to a second base station on said first base station's neighboring base station list only when a real-time measurement of traffic flow criteria indicates that said second base station can serve said call, whereby said call is not dropped by said second base station substantially immediately after said hand-off.

20. A system for varying a hand-off base station list operable to:
measure real-time traffic flow criteria associated with one or more base stations, the stations included in an adaptable neighbor list of potential hand-off base stations;
vary a size of the neighbor list depending on the measured traffic flow criteria;
and
enable or prevent a hand-off between a wireless device and at least one of the base stations on the varied list based on the measured traffic flow criteria.

21. The system as in claim 20 comprising a control section operable to vary the size of the neighbor list so that the size is set below an initial size to prevent a return to an overload traffic condition.

22. The system as in claim 20 comprising a control section operable to maintain an initial neighbor list and generate an adaptable neighbor list of potential hand-off base stations based on traffic flow criteria.

23. The system as in claim 20 comprising a control section operable to vary the size of the adaptable neighbor list without requiring human intervention.

24. The system as in claim 20 comprising a control section operable to decrease the size of the adaptable neighbor list as the traffic criteria worsen.

25. The system as in claim 20 comprising a control section operable to increase the size of the adaptable neighbor list as the traffic flow criteria improves.

26. The system as in claim 20 wherein the number of base stations included in the adaptable neighbor list of potential hand-off base stations is less than a maximum number of base stations included in an initial neighbor list.

27. The system as in claim 20 comprising a control section operable to forward the varied, adaptable neighbor list to the wireless device.

28. A system for varying a hand-off base station list operable to:
measure traffic flow criteria of a base station on the list;
compare the measured flow criteria to a threshold; and
set a neighbor list size associated with the threshold based on the results of the comparison.

29. The system as in claim 28 further operable to:
compare the measured traffic flow criteria to a plurality of thresholds; and
set the size of the list to a size associated with a last threshold of the plurality of thresholds exceeded by the measured traffic flow criteria.

30. The system as in claim 28 wherein a value of the threshold may change over time.

31. The system as in claim 29 wherein the number of thresholds may change over time.

32. The system as in claim 28 wherein the neighbor list size associated with the threshold may change over time.

33. A system for controlling hand-offs in a base station, operable to:
measure, in real-time, traffic flow criteria related to a wireless network; and
control the length of a neighboring base station list as a function of the value of the traffic flow criteria.

34. A system for use in a wireless network operable to enable a base station currently serving a call for a wireless device to hand-off said call to another base station on its neighboring base station list only when a real-time measurement of traffic flow criteria meets an acceptable level.

35. The system as in claim 34 further operable to prevent said base station from handing-off said call when said traffic flow criteria does not meet said acceptable level.

36. A system for use in a wireless network operable to enable a first base station to hand-off a call being served by said first base station to a second base station on said first base station's neighboring base station list only when a real-time measurement of traffic flow criteria indicates that said second base station can serve said call, whereby said call is not dropped by said second base station substantially immediately after said hand-off.

37. A system for varying a hand-off base station list comprising:
means for measuring real-time traffic flow criteria associated with one or more base stations, the stations included in an adaptable neighbor list of potential hand-off base stations;

means for varying a size of the neighbor list depending on the measured traffic flow criteria; and

means for enabling or preventing a hand-off between a wireless device and at least one of the base stations on the varied list based on the measured traffic flow criteria.

38. The system as in claim 37 comprising a control section having means for varying the size of the neighbor list so that the size is set below an initial size to prevent a return to an overload traffic condition.

39. The system as in claim 37 comprising a control section having means for decreasing the size of the adaptable neighbor list as the traffic criteria worsen.

40. The system as in claim 37 comprising a control section comprising means for increasing the size of the adaptable neighbor list as the traffic flow criteria improves.

41. A system for varying a hand-off base station list comprising:
means for measuring traffic flow criteria of a base station on the list;
means for comparing the measured flow criteria to a threshold; and
means for setting a neighbor list size associated with the threshold based on the results of the comparison.

42. The system as in claim 41 comprising:
means for comparing the measured traffic flow criteria to a plurality of thresholds; and
means for setting the size of the list to a size associated with a last threshold of the plurality of thresholds exceeded by the measured traffic flow criteria.

43. A system for controlling hand-offs in a base station, comprising:
means for measuring, in real-time, traffic flow criteria related to a wireless network; and
means for controlling the length of a neighboring base station list as a function of the value of the traffic flow criteria.

44. A system for use in a wireless network comprising means for enabling a base station currently serving a call for a wireless device to hand-off said call to another base station on its neighboring base station list only when a real-time measurement of traffic flow criteria meets an acceptable level.

45. The system as in claim 44 comprising means for preventing said base station from handing-off said call when said traffic flow criteria does not meet said acceptable level.

46. A system for use in a wireless network comprising means for enabling a first base station to hand-off a call being served by said first base station to a second base station on said first base station's neighboring base station list only when real-time measurement of traffic flow criteria indicates that said second base station can

serve said call, whereby said call is not dropped by said second base station substantially immediately after said hand-off.

47. A method for varying a hand-off base station list comprising:
measuring the level of one or more pilot signals, each pilot signal associated with a potential hand-off base station included in an adaptable neighbor list of potential hand-off base stations that has been sized to prevent a return to an overload traffic condition;
enabling a hand-off between the wireless device and at least one base station on the list when the at least one base station is associated with an acceptable pilot signal level; and
preventing a hand-off between the wireless device and at least one base station when the at least one base station is associated with an unacceptable pilot signal or will result in a return to an overload traffic condition.

48. A system for varying a hand-off base station list operable to:
measure the level of one or more pilot signals, each pilot signal associated with a potential hand-off base station included in an adaptable neighbor list of potential hand-off base stations that has been sized to prevent return to an overload traffic condition;
enable a hand-off between the wireless device and at least one base station on the list when the at least one base station is associated with an acceptable pilot signal level; and
prevent a hand-off between the wireless device and at least one base station when the at least one base station is associated with an unacceptable pilot signal or will result in a return to an overload traffic condition.

49. A system for varying a hand-off base station list comprising:
means for measuring the level of one or more pilot signals, each pilot signal associated with a potential hand-off base station included in an adaptable neighbor list of potential hand-off base stations that has been sized to prevent return to an overload traffic condition;
means for enabling a hand-off between the wireless device and at least one base station on the list when the at least one base station is associated with an acceptable pilot signal level; and

means for preventing a hand-off between the wireless device and at least one base station when the at least one base station is associated with an unacceptable pilot signal or will result in a return to an overload traffic condition.